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10/828,345	04/21/2004	Hyun-Kyung Choi	P-0658	6695

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EXAMINER
LEE, BETTY E

ART UNIT	PAPER NUMBER
2619	

NOTIFICATION DATE	DELIVERY MODE
07/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

	Application No.	Applicant(s)
Office Action Summary	10/828,345	CHOI, HYUN-KYUNG
	Examiner	Art Unit	
	BETTY LEE	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>31 March 2008</u>.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-12,15-19,23 and 25-27</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-12,15-19,23 and 25-27</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   Claims **1, 2, 6-12, and 15-18** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Han (US 2003/0103518) in view of Hayem et al. (US 2004/0185899).

Regarding claim 1, Han teaches a single mode terminal, comprising: a video

chip (see Fig. 1) having an application of packet data services (see Fig. 1 Box 111) and

a first communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109); and a first

physical layer coupled to the video chip through an interface (see Fig. 1 Box 101) and

having a protocol stack relating to a first communication network (see Fig. 1 Boxes 103,

105, 107, and 109), wherein the first data communication protocol converts from PPP

packets received from the network into IP packets, and the first data communication

protocol converts IP packets into PPP packets (see paragraph 27). Han teaches all the

subject matter of the claimed invention with the exception of the physical layer

containing a modem chip, a second data communication protocol, and a second

network modem chip coupled to the video chip through an interface and having a

protocol stack relating to a second communication network.

However, Hayem teaches the physical layer containing a first modem chip (see

Fig. 10 Box 1010);

a second data communication protocol (see Fig. 10 Box 1016; The second data

communication protocol is WCDMA) and a second network modem chip coupled to an

another chip through an interface (see Fig. 8) and having a protocol stack relating to a

second communication network (see Fig. 8 Box 716). Thus, it would have been obvious

to one of ordinary skill in the art to use the system of Hayem in the system of Han. The

motivation for doing so is to add a second mode to make the terminal more flexible.

Regarding claims 2, Han further teaches the first data communication protocol

performs IP packet processing and performs mutual conversion of IP packets and PPP

packets only in communication with the first network (see paragraph 27).

Regarding claims 6 and 7, Han further teaches the application of packet data

service is directly interworked with a socket of a TCP/IP superior layer (see paragraph

24 and Fig. 1 Boxes 111 and 109).

Regarding claim 8, Han teaches all the subject matter of the claimed invention

with the exception of the first network modem chip and the second network modem chip

perform only functions of a modem. However, Hayem teaches the first modem chip and

the second modem chip perform only functions of a modem (see Fig. 10 Boxes 1010 and 1016).

Regarding claim 9, Han further teaches the first data communication protocol, the first network modem chip and the first communication network are based in a CDMA network (see paragraph 5).

Regarding claim 10, Han teaches all the subject matter of the claimed invention with the exception of the second data communication protocol, the second network and the second communication network are based in a WCDMA network. However, Hayem teaches the second data communication protocol, the second network and the second communication network are based in a WCDMA network (see Fig. 10 Box 1016). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Hayem in the system of Han. The motivation for doing so is to add a second mode to make the terminal more flexible.

Regarding claim 11, Han teaches a single mode terminal, comprising: a video chip (see Fig. 1) having an application of packet data services (see Fig. 1 Box 111) and a first communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109); and a first physical layer coupled to the video chip through an interface (see Fig. 1 Box 101) and having a protocol stack relating to a first communication network (see Fig. 1 Boxes 103, 105, 107, and 109); when a packet is transmitted from the terminal to a communication network a packet is provided to the physical layer from the video chip (see paragraphs 26 and 28), and when a packet is transmitted form the communication network to the terminal, an IP frame is received at the video chip through the physical layer the video

chip performing the packet processing and interworking with a socket (see paragraph 29 and 31 and Fig. 1); converting an IP packet to a PPP packet in a video chip (see paragraph 30), converting the PPP packet into a PPP frame and providing the PPP frame to a first network physical layer when a packet is transmitted from the terminal to the first communication network in packet data communication (see paragraph 44) and receiving a PPP frame at the video chip through the first network physical layer (see paragraph 28), converting into an IP frame (see paragraphs 29 and 30), and performing packet processing and interworking with the socket when a packet is transmitted from the first communication network to the terminal (see Fig. 1). Han teaches all the subject matter of the claimed invention with the exception of the physical layer containing a modem chip, a second data communication protocol, a second network modem chip coupled to the video chip through an interface and having a protocol stack relating to a second communication network, the communication with the second network through a second network modem, and first network physical layer including a modem.

However, Hayem teaches the physical layer containing a first modem chip (see Fig. 10 Box 1010);

a second data communication protocol (see Fig. 10 Box 1016; The second data communication protocol is WCDMA) and a second network modem chip coupled to an another chip through an interface (see Fig. 8) and having a protocol stack relating to a second communication network (see Fig. 8 Box 716); teaches communication with a second network done through a second network modem (see Fig. 10 Box 1016); and the physical layer containing a first modem chip (see Fig. 10 Box 1010). Thus, it would

have been obvious to one of ordinary skill in the art to use the system of Hayem in the

system of Han. The motivation for doing so is to add a second mode to make the

terminal more flexible.

Regarding claim 15, the limitations of claim 15 have been discussed in claim **9**.

Regarding claim 16, the limitations of claim 16 have been discussed in claim **10**.

Regarding claims 17 and 18, the limitations of claims 17 and 18 have been

discussed in claims **6 and 7**.

4.   Claims **3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Han (US 2003/0103518) in view of Hayem et al. (US 2004/0185899) as applied to claim

2 above, and further in view of Nah (US 2003/0081666).

Regarding claim 3, Han teaches all the subject matter of the claimed invention

with the exception of the video chip communicates with the first network modem chip

through a UART interface and communicates with the second network modem chip

through a DPRAM interface. Hayem further teaches a chip communicating with the

second network modem chip through a DPRAM interface (see paragraph 62). Thus, it

would have been obvious to one of ordinary skill in the art to use the system of Hayem

in the system of Han. The motivation for doing so is to increase the processing speed

by using a DPRAM so that data can be read and written simultaneously. Han in view of

Hayem teaches all the subject matter of the claimed invention with the exception of

communicating with the first modem chip through a UART interface.

However, Nah teaches a chip communicating with a CDMA modem chip through a UART interface (see Fig. 2 Box 34). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Nah in the system of Han. The motivation for doing so is to convert data into serial form.

Regarding claim 4, Han in view of Hayem teaches all the subject matter of the claimed invention with the exception of the video chip and the first network modem chip each include a UART driver in order to communicate through the UART interface. However, Nah teaches a chip and the first network modem chip each include a UART driver in order to communicate through the UART interface (see Fig. 2 Box 34; The UART driver is required to use the UART interface.). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Nah in the system of Han in view of Hayem. The motivation for doing so is to convert data into serial form.

5.   Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US 2003/0103518) in view of Hayem et al. (US 2004/0185899) and Nah (US 2003/0081666) as applied to claim 3 above, and further in view of Lee (KR 2003084005).

Regarding claim 5, Han in view of Hayem and Nah teaches all the subject matter of the claimed invention with the exception of an IPC driver through the DPRAM interface. However, Lee teaches a DPRAM with a IPC (see Abstract). Thus, it would have been obvious to one of ordinary skill in the art to use the IPC of Lee in the system

of Han in view of Hayem and Nah. The motivation for doing so is to add the benefit of

an interrupt system.

6.   Claims **19, 23, and 25-27** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Han (US 2003/0103518) in view of Park et al. (EP 1 213 941) as

applied to claim 19 above, and further in view of Hayem et al. (US 2004/0185899).

Regarding claim 19, Han teaches a terminal including a video chip (see Fig. 1)

having a first data communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109;

transmitting packet data to a first network (see paragraph 28); receiving data from the

first network (see paragraph 31); and transmitting a pertinent IP frame to a network by

transmitting the IP packet directly to the physical layer (see paragraph 28). Han

teaches all the subject matter of the claimed invention with the exception of judging a

system mode.

However, Park teaches judging a system mode (see paragraph 23); the system

mode is selected from a first communication network service and a second

communication network service (see paragraph 23); and selecting the network based

on system mode and receiving data from the second network (see paragraph 23; Once

handoff is complete, the terminal begins receiving data from the second network.).

Thus, it would have been obvious to one of ordinary skill in the art to use the system of

Park in the system of Han. The motivation for doing so is to provide the mobile terminal

with the best service available. Han in view of Park teaches all the subject matter with

the exception of the physical layer comprising a modem chip. However, Hayem

teaches the physical layer containing a second modem chip (see Fig. 10 Box 1016).

Thus, it would have been obvious to one of ordinary skill in the art to use the system of

Hayem in the system of Han in view of Park. The motivation for doing so is to enable

the terminal to convert digital data into analog form for transmission through a wireless

medium.

Regarding claim 23, Han teaches transmitting an IP frame passing IP packet

processing to a PPP, converting the IP frame into a PPP frame (see paragraph 27);

transmitting the PPP frame to a first network physical layer (see paragraph 28). Park

teaches transmitting the data to the first network according to the system mode (see

paragraph 23). Han in view of Park teaches all the subject matter with the exception of

the physical layer comprising a modem chip. However, Hayem teaches the physical

layer containing a first modem chip (see Fig. 10 Box 1010). Thus, it would have been

obvious to one of ordinary skill in the art to use the system of Hayem in the system of

Han in view of Park. The motivation for doing so is to enable the terminal to convert

digital data into analog form for transmission through a wireless medium.

Regarding claim 25, Han further teaches transmitting a PPP frame received

from a communication network to the video chip when packet data is received from the

communication network (see paragraph 48); and converting the PPP frame into an IP

frame and performing packet processing in the video chip and operating application of a

pertinent packet data service (see paragraph 48).

Regarding claim 26, Han further teaches the first data communication protocol

and the first network are based in a CDMA network (see paragraph 5).

Regarding claim 27, Han teaches all the subject matter of the claimed invention
with the exception of the second data communication protocol and the second network
are based in a WDMA network. However, Hayem teaches the second data
communication protocol and the second network are based in a WCDMA network (see
Fig. 10 Box 1016). Thus, it would have been obvious to one of ordinary skill in the art to
use the system Hayem in the system of Han in view of Park. The motivation for doing
so is to add a second mode to make the terminal more flexible.

Response to Arguments

7.   Applicant's arguments filed March 31, 2008 have been fully considered but they
are not persuasive.

With respect to applicant's arguments regarding claims 1, 11, and 19, applicant
submits that Han in view of Hayem does not teach the first data communication protocol
of the video chip converts PPP packets received from the first network modem chip into
IP packets for the video chip, and the first data communication protocol of the video chip
converts IP packets in the video chip into PPP packets for the first network modem chip.
Examiner respectfully disagrees.

Han teaches a terminal that supports the processing of video on demand data
between layers, which is done in a chip (see Fig. 1 and paragraphs 28-30). When the
data is sent between the PPP and IP layers the data is converted for each of the layers.

Hayem teaches a wireless chip in multi-mode device (see Fig. 10) with multiple modem chips supporting protocol stacks (see Fig. 8) for receiving data from different networks using communication protocols.

One of ordinary skill in the art would be motivated to combine Han and Hayem to produce a terminal that would be able to handle various network scenarios by having multiple modems to connect to various types of networks.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to BETTY LEE whose telephone number is (571)270-1412.

The examiner can normally be reached on Monday-Thursday 9-5 EST and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. L./
Examiner, Art Unit 2619

/Hassan Kizou/

Supervisory Patent Examiner, Art Unit 2619